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Case Report

HODGKIN'S LYMPHOMA THERAPY OF A FEMALE IN HOSPITAL OF ISLAMABAD, PAKISTAN; A CASE REPORT

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ABSTRACT

Hodgkin's lymphoma (HL) is most curable form of cancer. HL accounts for 10% of lymphoma. The etiology of it remains unrevealed for a long time, now the outlook for HL has improved over the past 30 years. It responds well to the treatment. The cure rate tends to be higher in adults as compare to the elder ones. A nineteen year female was presented in a hospital with HL. On basis of her medical investigation the physician prescribed intravenous decadron 8mg in normal saline of 500ml once, adriblastina 30 mg in normal saline 100ml over 10 mins, setrovel 5mg IV, bleomycin 15mg IV, vinblastin 6mg IV,DTIC 430 MG in 5% D/W 500 mg IV over 3 hours and filgen 300mg S.C once daily. Vital signs showed fever, weakness and loss of appetite.PR 118/minute, 100 F temperature, and BP 90 /60, Wt 37 kg. General appearance was paleness, fever and anemia. Lab tests: Hb 6, Platelets 82,000.TLC 55000, AFB +ve, MCV 73.4, MCH 21.1.There were certain inaccuracies seen during treatment. So an optimal and safe clinical practice should be implement in health centres.Poor and sub-standard services should be minimize to enhance and improve the health and pharmaceutical care. Thus; the proper clinical care should be delivered to minimize the health hazards related to this mortal disease.

Key Words: Hodgkin lymphoma, female, pharmaceutical care, clinical responsibilities.

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INTRODUCTION:

HL is minor and uncommon hetrogenous lymphoreticular disorder in all age groups. Another name of HLis Hodgkin's Disease.It is type of cancer of white blood cells called lymphocytes .It was named after Thomas Hodgkin,who explained abnormalities and problems in lymph system in1832.In 1898 , Sterberg and in 1902, Reed explained in detailed and descriptive form of study about multinucleated gaing cells in the HL. People with HL have large abnormal gaint cells named Reed Sterberg (RS) in their lymph nodes. Types of HL are based on differences in morphology i.e. phenotype , genotype and clinical diagnosis. Types are Mixed cellularity HL,Mixed cellularity, Lymphocyte-rich and Lymphocyte-depleted HL.The first sign in this type of cancer is swollen lymph node having no specific cause then this disease spread to other organs of the body i.e. nearby lymph nodes and to bone marrow, liver, spleen .

Major and mostly seen symptoms are anemia, neutropenia, fever, night sweats, chills, loss of appetite and loss of weight. Other can be chest pain or pain below ribs due to swollen liver or spleen, breathing complications, skin flushing etc. Initially HL was thought as infection or autoimmune disease but its malignant nature was confirmed by RS, which is hallmark of the disease. These cells are abnormal large size cells having weakly eosinophilic cytoplasm. Cause of the HL is still unknown but mostly it occurs due to the mutation in the DNA of the B-cells which are infection fighters. Due to this type of mutation cells rapidly and continuously live. Three major viruses cause the HL are Herpes virus 6,Cytomegalo virus and Eptein Barr Virus(EBV).EBV is related to Mixed cellularity HL.EBV mostly occur in less than 10 years.Ataxia,Swiss type agamma globulinemia, rheumatoid arthritis and systematic lupus erythematiosis(SLE) is associated with genetic HL.HL frequently occurs in 15-35 and over 55 years old which varies with nationality.

The HL annual cases is about 1 in 25,000 people and disease accounts less than1% of all cancers in the world.(1).HL in 10-15% in western countries. The incidence of HL, in data of United States and European registries ranges from 2.3 to 3.2 per 100,000 men and 1.3 to 2.5 per 100,00 women(2).33 people out of 204 has HL. Patients mostly hailed from North West Frontier Province(NWFP) and upper Punjab(42% and24%).The patients had cervical involvement (78%), bone marrow involvement was seen in 9%.The people were presented with stage 3(45%).

The most common type of HL is mixed cellularity HL (54%) followed by nodular sclerosis(30%).70% of the patients were off therapy and 9% is overall mortality. HL constitutes 16% malignancies in children hospital. In Pakistan, the age in usually presented is low.(3).Among 100 cases, 4.5:1 is the male: female ratio and age ranges are 4-82 years and average is 26.6 years. In developing countries distribution of subtypes of HL is mixed cellularity is commonest type i.e 57% followed by nodular sclerosis 35%. Lymphocyte rich 6% and predominant 2% is nodular lymphocyte.(4).Non HL was 73% more than HL.Mixed- cellularity and nodular sclerosis were the most common but the main histological varients of HL.(5).The estimated survival is about 86% of 5 years. Overall, it is more common in males, except nodular sclerosis variant which is more common in females. The treatment depends on patients and stage and type of HL.

CASE REPORT

A female was admitted in Chemo-day-care of local hospital, Islamabad, Pakistan. She was 19 years old married and having one child (passed away). Her history was low grade fever and 8 month loss of appetite. Her family history was her father had cancer and had surgery. Her socioeconomic history was she belongs to a middle class family. She was presented with chief complaints of fever, fatigue, weakness and loss of appetite. The fever was associated with chills. Her physical examination showed PR 118/minute, 100 F temperatures, BP 90/60, Wt 37kg.General appearance was pallor and general assessment was fever and anemia. Her Lab tests were: Hb 6g/dl (11.5-16g/dl), Platelets 82,000 (lesser than 100,000), TLC 55000(4-11*10^9 or 4000-10,000), AFB +ve, MCV 73.4 (76-96 fl), MCH 21.1 (26-32 pg).Her weight was 37 kg and she was under weight.

On basis of primary medical diagnosis the physician prescribed the IV (intravenous) decadron (dexamethasone) 8mg in normal saline of 500ml OD(once daily), adriblastina (doxorubicin) 30 mg in normal saline 100ml over 10 mins, setrovel (tropisetron) 5mg IV OD for 4 months. But

her platelets count and lymphocytes was decreasing persistently so after 4 month physician prescribed bleomycin 15mg IV OD, vinblastin 6mg IV OD, DTIC (decarbazine) 430 mg in 5% D/W 500 mg IV over 3 hours. After 10 month she was prescribed with filgen (filgrastin) 300mg S.C OD. Her body temperature normalized and chill diminished, her appetite was increased and this treatment reduces neutropenia resulted in better initial tumor control. Thus, the treatment was continued.

DISCUSSION

Chemotherapy is the use of medicinal agents and drugs to stop or kill the tumor cells growth and shrinks them. It is mostly, commonly and well known treatment of cancer. For HL treatment are of different types i.e. ABVD, BEACOPP, MOPP and Standard V.

Stanford V (*Stanford Five*) is a chemotherapy regimen intended as a first treatment for HL. The regimen was developed in 1988, with purpose of decreasing short and long term toxicity and maintaining higher remission rate..ABVD is considered more beneficial than other therapies. ABVD is most common treatment used for early and advanced HL in western nations.246 of 283(87%) HL patients from University of Mayo Clinic prospective observation database received ABVD as a starting treatment in 2003 (6).The standard treatment plan recommendations for the woman under discussion are:

Dosage for 28-day cycle of ABVD are Adriamycin 25 mg/m^2 IV on days 1 and 15,Bleomycin 10 units/m^2 IV on days 1 and 15,Vinblastine 6 mg/m^2 IV on days 1 and 15,Dacarbazine 375 mg/m^2 IV on days 1 and 1

Dexamethasone 4-8 mg/ m^2 depend on individual schedule, tropisetron 5 mg/ m^2, decarbazine 150mg/ m^2 IV once a day for 5 days, repeated every 4 weeks or 375 mg/ m^2 once repeated every 15 days in combination therapy and filgrastim 5 ug/kg/day

Physician did not follow the entire drug regimen initially. First he prescribed decadron 8mg,adriblastina 30mg and setrovel 5mg(all IV) then after 4 months he prescribed bleomycin 15mg IV OD, vinblastin 6mg IV OD, DTIC (decarbazine) 430 mg in 5% D/W 500 mg IV over 3 hours. After 10 month she was prescribed with filgen (filgrastin) 300mg S.C OD.

Physician follows one of the drug regimens that were ABVD after 4 months. He prescribed ABVD along with decadron (dexamethasone that is gluco-corticosteroid for anti inflammatory action, to treat nausea and vomiting and to stimulate appetite), setrovel (tropisetron that is 5HT3-serotonin receptor antagonist for anti-emetic action) and filgen (filgrastim to reduce neutropenia). Neutropenia is the main side effect of ABVD chemotherapy so physician has prescribed filgen to reduce it. This study is substantiated by Bhanu Vakkalanka and Brian K. Link (2010), (2) but it s not necessary that adverse effects occur or ABVD administration irrespective of granulocyte counts should be done (7).The dose of decadron 8mg, vinblastin 6mg and setrovel 5mg was according to the specification but doses of other drugs were noticed higher than the recommended dose.i.e,adriblastina 30mg(recommended dose= 25mg), bleomycin 15mg(recommended dose= 10mg), DTIC 430mg(recommended dose= 375 mg and filgen 300mg (recommended dose=185ug).

CONCLUSION

The rational chemotherapy is a serious and important issue and should be solve out by health specialists as in this case doses are not accurately prescribed by physician .The correct diagnosis and treatment plan is very important. Immuno-histochemistry is not frequently used in our clinical and medical setup, its use should be increased so that data and control of lymphoid neoplasm can be raised so that optimal therapy can be attained and poor clinical services can be avoided to decrease undesired health side effects.

RECOMMENDATIONS

Rituximab is a monoclonal antibody against CD 20 is not routinely used in HL due to lack of CD20 surface antigens in most of cases. Its use in HL has been reviewed again. Increased age is although a risk factor for HL but generally elderly patients are more tolerable to HL treatment and have desired outcomes as compare to younger patients. For HL radiation oncologists use external beam radiation therapy (EBRT) using linear accelerator machine.

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